

REMARKS

Applicant submits this response to the Office Action dated March 29, 2005. In view of the foregoing amendments and the following remarks, it is submitted that the application is in condition for allowance, and the Examiner is respectfully requested to enter the amendments and allow the claims.

The Office Action of March 29, 2005, which was made final, objected to the drawings for the reason that the reference number 86 was not mentioned in the description of the application. In response, applicant has amended paragraph 0022 of the specification to include a reference to a "line 86" as shown in FIG. 1. This amendment obviates the need to modify the drawings, and thus there is no need to submit any amended replacement drawing sheet. Applicant has also amended paragraph 0019 of the specification to insert the reference number "56" as suggested by the Office Action.

As to the claims, the Office Action rejected pending claims 1-6 under 35 U.S.C. § 102 as being anticipated by Schwab et al. (U.S. 5,922,103). In response, applicant has amended the claims to more particularly point out the distinctively claim the invention, and it is believed that the claimed invention is not anticipated or rendered obvious by Schwab.

Specifically, independent system claim 1 has been amended to recite that the spray controller determines a desired valve position for the liquid flow valve based on a measured temperature of the flue gas and a set-point temperature, and supplies a control signal to the liquid flow valve to adjust it to the desired valve position, thereby causing a change in a liquid flow rate through the liquid flow valve when a difference exists between the measured temperature and the set-point temperature. Corresponding changes are also made in independent method claim 5. Support for these limitations is found, for example, in pages

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9-10, where it is described that the spray controller calculates the desired valve position and controls the actual valve position accordingly.

These limitations are not taught or suggested by Schwab. The control system of Schwab has a first control loop for a normal or steady operation state, and a second control loop for an abnormal operation state during, for example, an upset condition. As stated in Schwab:

The first control loop means may comprise means for determining the difference between the temperature of the flow within the air pollution control system, such as near the exit of a gas conditioning tower, and a target temperature, and for **adjusting the spray when the difference exceeds a predetermined amount.**

Col. 4, lines 18-23 (emphasis added). Thus, no adjustment to the spray is made in the Schwab system unless the difference between the gas temperature and the target temperature exceeds the predetermined amount.

In contrast, as recited in claims 1 and 5 as amended, a desired valve position for the liquid flow valve is determined based on the measured temperature and a set-point temperature, and the valve position of the liquid flow valve is adjusted to change the flow rate through the valve when there is a difference between the measured temperature of the flue gas and set-point temperature. Thus, the liquid flow rate is changed, resulting in a change to the spray, without requiring the temperature difference to exceed a predetermined amount. This approach is substantially different from the operation taught by Schwab, and is not anticipated or rendered obvious by Schwab. Accordingly, claims 1 and 5 as amended should be allowable over Schwab. Since the remaining claims depend from claims 1 and 5, they should also be allowable for at least this reason.

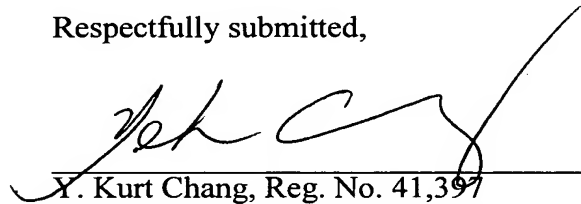
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In this regard, claim 2 has been amended to recite that the desired valve position is calculated according to the equation described in pages 9-10 of the specification. That particular equation, of course, is not taught or suggested by Schwab, and presents a further reason for claim 2 to be allowable over Schwab.

Conclusion

Applicant submits that the claims presented herein are patentable. The Examiner is respectfully requested to enter the amendments, and prompt and favorable consideration is earnestly solicited.

Respectfully submitted,



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